

WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Matanuska-Susitna Borough Sampling Date: 08-Jul-13
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW13_T128_01
 Investigator(s): JER Landform (hillside, terrace, hummocks etc.): Flat
 Local relief (concave, convex, none): hummocky Slope: 0.0 % / 0.0 ° Elevation: 1038
 Subregion: Southcentral Alaska Lat.: 62.943216562 Long.: -148.86689043 Datum: WGS84
 Soil Map Unit Name: _____ **NWI classification: PSS1/4B**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: flat margin adjacent pond, but not classic lacustrine fringe, water in pit above lake level, prob downslope v. lacustrine	

VEGETATION -Use scientific names of plants. List all species in the plot.

<u>Tree Stratum</u>	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	0	<input type="checkbox"/>	_____	Number of Dominant Species That are OBL, FACW, or FAC: <u>4</u> (A)
2. _____	0	<input type="checkbox"/>	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____	0	<input type="checkbox"/>	_____	Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
4. _____	0	<input type="checkbox"/>	_____	
5. _____	0	<input type="checkbox"/>	_____	
Total Cover: <u>0</u>				
Sapling/Shrub Stratum	50% of Total Cover: <u>0</u>	20% of Total Cover: <u>0</u>		Prevalence Index worksheet:
1. <u>Salix pulchra</u>	12	<input checked="" type="checkbox"/>	FACW	Total % Cover of: Multiply by:
2. <u>Empetrum nigrum</u>	35	<input checked="" type="checkbox"/>	FAC	OBL Species <u>0</u> x 1 = <u>0</u>
3. <u>Spiraea stevenii</u>	5	<input type="checkbox"/>	FACU	FACW Species <u>21</u> x 2 = <u>42</u>
4. <u>Salix fuscescens</u>	3	<input type="checkbox"/>	FACW	FAC Species <u>62.1</u> x 3 = <u>186.3</u>
5. <u>Cassiope tetragona</u>	5	<input type="checkbox"/>	FACU	FACU Species <u>13.2</u> x 4 = <u>52.80</u>
6. <u>Vaccinium uliginosum</u>	10	<input type="checkbox"/>	FAC	UPL Species <u>0</u> x 5 = <u>0</u>
7. <u>Salix rotundifolia</u>	2	<input type="checkbox"/>	FAC	Column Totals: <u>96.3</u> (A) <u>281.1</u> (B)
8. <u>Ledum decumbens</u>	3	<input type="checkbox"/>	FACW	Prevalence Index = B/A = <u>2.919</u>
9. <u>Vaccinium vitis-idaea</u>	5	<input type="checkbox"/>	FAC	
10. <u>Picea glauca</u>	0.1	<input type="checkbox"/>	FACU	
Total Cover: <u>80.1</u>				
Herb Stratum	50% of Total Cover: <u>40.05</u>	20% of Total Cover: <u>16.02</u>		Hydrophytic Vegetation Indicators:
1. <u>Carex bigelowii</u>	8	<input checked="" type="checkbox"/>	FAC	<input checked="" type="checkbox"/> Dominance Test is > 50%
2. <u>Rubus chamaemorus</u>	3	<input checked="" type="checkbox"/>	FACW	<input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0
3. <u>Diphysastrum alpinum</u>	1	<input type="checkbox"/>	FACU	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>Saxifraga tricuspidata</u>	0.1	<input type="checkbox"/>	FACU	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
5. <u>Gentiana glauca</u>	0.1	<input type="checkbox"/>	FAC	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
6. <u>Anemone narcissiflora</u>	1	<input type="checkbox"/>	FACU	Plot size (radius, or length x width) <u>10m</u>
7. <u>Sedum rosea</u>	2	<input type="checkbox"/>	FAC	% Cover of Wetland Bryophytes (Where applicable) _____
8. <u>Artemisia norvegica</u>	1	<input type="checkbox"/>	FACU	% Bare Ground <u>9</u>
9. _____	0	<input type="checkbox"/>	_____	Total Cover of Bryophytes <u>70</u>
10. _____	0	<input type="checkbox"/>	_____	
Total Cover: <u>16.2</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
50% of Total Cover: <u>8.1</u>	20% of Total Cover: <u>3.24</u>			

Remarks: hylspl, pticri, polyt, cladi 20, nepartc, stereo, surf water 2

SOIL

Sampling Point: **SW13_T128_01**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7		100					Fibric Organics	fibric w sand and silt within matrix
7-8	7.5YR	2.5/2	100				Loamy Sand	high organic content
8-16	10YR	3/4	100				Sand	course sand and grvl w few cobble and som

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix ² Location: PL=Pore Lining. RC=Root Channel. M=Matrix

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol or Histel (A1) <input checked="" type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Alaska Gleyed (A13) <input type="checkbox"/> Alaska Redox (A14) <input type="checkbox"/> Alaska Gleyed Pores (A15)	<p>Indicators for Problematic Hydric Soils:³</p> <input type="checkbox"/> Alaska Color Change (TA4) ⁴ <input type="checkbox"/> Alaska Alpine swales (TA5) <input type="checkbox"/> Alaska Redox With 2.5Y Hue <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer <input checked="" type="checkbox"/> Other (Explain in Remarks)
--	--

³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present
⁴ Give details of color change in Remarks

<p>Restrictive Layer (if present): Type: frost Depth (inches): 23</p>	<p>Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/></p>
---	--

Remarks:
 very high organic content in 7-8in layer, believe this meets histic epipedon requirements. see notes in hydro section.

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (any one is sufficient)</p> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Other (Explain in Remarks)	<p>Secondary Indicators (two or more are required)</p> <input type="checkbox"/> Water Stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input checked="" type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-neutral Test (D5)
---	--	--

<p>Field Observations:</p> <p>Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches):</p> <p>Water Table Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): 5</p> <p>Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): 2</p>	<p>Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/></p>
---	--

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspection) if available:

Remarks:
 really course substrate below organics. water level above lake level probbably moree influenced by slope, but ocassionaally flooded by the lake (from sands and silts found in the organic layer).